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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,943	11/09/2001	Rick Wendell Bajema	CFLAY.00055	2894
22858	7590	04/19/2004	EXAMINER	
CARSTENS YEE & CAHOON, LLP P O BOX 802334 DALLAS, TX 75380			DEL SOLE, JOSEPH S	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/990,943	BAJEMA, RICK WENDELL	
	Examiner	Art Unit	
	Joseph S. Del Sole	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/24/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-10 and 15-18 in the Paper of 2/12/04 is acknowledged. The traversal is on the ground(s) that an examination of all of the claims would not impose an undue burden on the Examiner. This is not found persuasive because the additional searching would be an undue burden, requiring additional search including those of class/subclass combinations 426/496 and 264/167.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 11-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected method, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 15-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindqvist (4,541,793).

Lindqvist teaches a circular die for extrusion (Fig. 2) the die having an outer die (Fig 2, #35) having a generally conically shaped opening and in fluid communication with an extruder (Fig 2, #22); an inner cone (Fig 2, #34) nested in non-contact with the outer conically shaped die opening; a drive shaft (Fig 2, #30) connected to the inner

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cone and located outside of the outer die, wherein the inner cone rotates axially with the drive shaft (col 3, lines 16-21); a motor (Fig 2, #45) connected to the drive shaft (Fig 2, that which puts the shaft and inner cone is, by definition, a motor); and the inner cone and outer circular die can rotate axially independent of each other (col 3, lines 59-63).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindqvist (4,41,793) in view of Thomas et al (4,444,702).

Lindqvist et al teach the apparatus as discussed above.

Lindqvist et al fail to teach the inner cone being adjustable fore and aft within the outer circular die.

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Thomas et al teach an inner cone (Fig 1, #17) being adjustable fore and aft within an outer circular die (through the movement generated by piston #21) for the purpose controlling the diameter of the extruded product (col 4, lines 3-30).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Lindqvist et al with an inner cone being adjustable fore and aft within an outer circular die as taught by Thomas et al because it enables the wall thickness of the extrudate to be altered during extrusion.

8. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindqvist (4,41,793) in view of Kader (3,985,490).

Lindqvist et al teach the apparatus as discussed above.

Lindqvist et al fail to teach the inner cone being adjustable fore and aft within the outer circular die.

Kader teaches an inner cone (Fig 1, #14) being adjustable fore and aft within an outer circular die (through the movement of rod #28) for the purpose controlling the diameter of the extruded product (col 3, lines 20-33).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Lindqvist et al with an inner cone being adjustable fore and aft within an outer circular die as taught by Kader because it enables the wall thickness of the extrudate to be altered during extrusion.

9. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindqvist (4,541,793) in view of Omi et al (6,547,551).

Lindqvist et al teach the apparatus as discussed above.

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Lindqvist et al fail to teach either the inner cone or outer die being heated or cooled.

Omi et al teach a circular die with an outer die and an inner core wherein cooling jackets with built in heaters (Fig 5, #90) are provided to the outer die and the inner core for the purpose of supplying temperature control as the product is extruded (col 3, lines 53-59).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Lindqvist et al with cooling jackets having built in heaters on the outer die and inner cone as taught by Omi et al because it enables control of the temperature of the extruded product.

10. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindqvist (4,541,793) in view of Waters et al (4,573,893).

Lindqvist et al teach the apparatus as discussed above.

Lindqvist et al fail to teach either the inner cone or outer die being cooled.

Waters et al teach a circular die with an outer die and an inner core wherein both the inner core and outer die are cooled for the purpose of rapidly and uniformly cooling the product to improve the quality of the product (col 1, lines 58-61).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Lindqvist et al with the inner cone and outer die being cooled as taught by Waters et al because it has the capability of improving the dimensional integrity of the product (col 1, lines 62-65).

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11. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindqvist (4,541,793) in view of Kovach et al (3,311,952).

Lindqvist et al teach the apparatus as discussed above.

Lindqvist et al fail to teach either the inner cone or outer die being heated.

Kovach et al teach a circular die with an outer die and an inner core wherein both the inner core and outer die are heated (Fig 1, #66 and #68) the purpose of regulating the temperature of the die (col 4, lines 25-41).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Lindqvist et al with the inner cone and outer die being cooled as taught by Kovach et al because it enables the die temperature to be regulated.

References of Interest

12. Donald (3,279,501), Topolski (4,731,216) and van Muiden (5,639,409) are cited of interest to show the state of the art.

Donald teaches an extruder with an outer die and an inner core wherein the die and core rotate axially independent of each other.

Topolski and van Muiden teach the rotation of an outer die around an inner cone.

Allowable Subject Matter

13. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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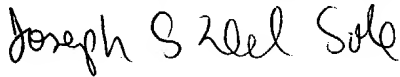
14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest a circular die with an outer die and an axially rotatably inner cone wherein a device exists for monitoring either the torque applied on the inner cone or the force applied by the extrudate on the inner cone.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).



J.S.D.
April 14, 2004